

SPECIFICATION

Electronic Version 1.2.8

Stylesheet Version 1.0

IMPROVED ELECTRODE PATTERNING IN OLED DEVICES

Cross Reference to Related Applications

- ➔ This application is a continuation-in-part of patent application titled "Improved Patterning of Electrodes in OLED Devices with Shaped Pillars", USSN 09/989,363 (attorney docket number 01P 20326US), which is herein Incorporated by reference for all purposes.

Background of Invention

[0001] Fig. 1 shows a conventional pixelated OLED device 100. Pixelated OLED devices can be used as displays in various consumer electronic products, including cellular phones, cellular smart phones, personal organizers, pagers, advertising panels, touch screen displays, teleconferencing and multimedia products, virtual reality products, and display kiosks.

[0002] Typically, the OLED device comprises a functional stack of one or more organic functional layers 110 between a transparent conductive layer 105 and a conductive layer 115. The functional stack is formed on a transparent substrate 101. The conductive layers are patterned to form rows of cathodes in a first direction and columns of anodes in a second direction. OLED pixels are located where the cathodes and anodes overlap. Bond pads 150 are coupled to the cathodes and anodes to control the OLED pixels. A cap 160, which forms a cavity 145 between it and the pixels, encapsulates the device to protect the OLED pixels from the environment such as moisture and/or air.

[0003] In operation, charge carriers are injected through the cathodes and anodes for recombination in the functional layers. The recombination of the charge carriers causes the functional layer of the pixels to emit visible radiation.

[0004] To provide a display with high resolution and high filling factor, the spacing